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10/723,469	11/26/2003	John P. Karidis	ARC920030084US1	7647

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EXAMINER

GEBRESILASSIE, KIBROM K

ART UNIT	PAPER NUMBER
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2128

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07/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/723,469	Applicant(s) KARIDIS ET AL.	
	Examiner KIBROM K. GEBRESILASSIE	Art Unit 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/21/2008 has been entered.
2. Claims 1-22 are presented for examination.

Response to Arguments

3. Applicants are thanked for amendments/Remarks.
4. Applicant's arguments relating to art rejection has been fully considered but they are not persuasive.
 - a. Applicant's argued:

Applicants respectfully submit that Kushler does not disclose, teach or suggest the present inventions features of: "recording a sequence of at least two tapped landing points on said keyboard, each of said sequence of at least two tapped landing points having a coordinate, and said sequence of at least two tapped landing points corresponding in a one-to-one manner to a sequence of correctly or incorrectly entered letters of a word, and a tapped space bar that delimits said word", as recited in currently amended, independent claim 1 and as similarly recited in currently amended, independent claim 8, 15, and 22, because Kushler teaches away from using "taps" to indicate letters.

In response, as seen in Fig. 2B, the prior art teaches at least more than two tapped landing points such as landing points 2212, 2214, 2216, and 2218. Further, in order to have a pattern matching, there must be at least two landing points to compare the geometry of the input letters with the words in database and identify a list of one or

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more words determined to be the most likely matching candidates (See: Col. 8 lines 11-24), which is recited as follows:

Kushler et al (Col. 8 lines 11-24) teaches:

The path traced out on the touch-screen by the user and recorded by the system for analysis is referred to as the input pattern. As the user traces out an input pattern on the touch-screen, the system records the sequence of points of contact detected by the touch-screen controller hardware. As the input pattern is recorded, it is processed by an input pattern analysis component. The input pattern analysis component extracts the data needed by the pattern matching component, which compares the extracted data with words in a database to identify a list of one or more words determined to be the most likely matching candidate words. One or more of these identified words are presented to the user for selection, and a selected word is added to the text being entered by the user.

Further, Kushler et al (Col. 20 lines 20-26) teaches:

- o word choice. If however, the user proceeds to continue tapping the keyboard, then the sequence of taps generates a word object comprised of the tap location letters concatenated in the sequence that the corresponding keys are tapped (the "tap location word"). Following the second tap,
- i this word composed of the tap location letters appears as the default word choice in the word choice list. Selection of this (i.e. at least two tapped landing points).

b. Applicants argued:

Yet further, Applicants respectfully argue that the following plain meanings for the words, "tap", "tapped", and "tapping" are not analogous to the input pattern of a word of multiple letters consisting of the coordinate locations of the sequence of points (see also, "a continuous

In response, examiner did not equate the "tap", "tapped" and "tapping" to the input pattern of a word as applicants indicated, but it is analogous to the landing points of stylus or finger of a user on each letters of the keyboard (for example, the landing points 2502, 2504, 2506, and 2508 of Fig. 2E). The pattern is only used for comparison and identification of the input letters to previously stored patterns.

Kushler et al (Col. 20 lines 20-26) teaches:

word choice. If however, the user proceeds to continue tapping the keyboard, then the sequence of taps generates a word object comprised of the tap location letters concatenated in the sequence that the corresponding keys are tapped (the "tap location word"). Following the second tap, this word composed of the tap location letters appears as the default word choice in the word choice list. Selection of this

In light of applicants definition for "tap", "tapped", "tapping" (Webster's New Universal Unabridged Dictionary), Kushler et al clearly teaches to enter information by tapping each letter on a keyboard.

c. Applicants argued:

.....
Furthermore, the only occasion of a TAP in Kushler is for the recognition of a single letter word; whereas, the present invention, in currently amended, independent claims 1, 8, and 15, would use two taps, i.e., the single letter tap and the space bar tap, to indicate a single letter word and at least three taps to indicate multiple letter words.

If this is true, then the main feature of input pattern matching of the prior art is not going to work and therefore the invention of the prior art is useless. To compare and identify the input pattern, there must be at

least two tapped landing points on the keyboard. Fig. 2E below clearly shows at least two tapped landing points of the stylus in order compare, identify and display the word typed based on the landing points of the stylus or finger.

d. Applicants argued:

Applicants respectfully further argue that as "said sequence of tapped landing points corresponding in a one-to-one manner to a sequence of correctly or incorrectly entered letters of a word", as recited in currently amended, independent claim 22, describes a sequence of a plurality of letters correctly or incorrectly entered for a word, the word must necessarily comprise at least two letters corresponding to at least two tapped landing points and the tapped space bar that delimits the word.

For example, Kushler et al (Col. 20 lines 20-26) teaches:

word choice. If however, the user proceeds to continue tapping the keyboard, then the sequence of taps generates a word object comprised of the tap location letters concatenated in the sequence that the corresponding keys are tapped (the "tap location word"). Following the second tap, this word composed of the tap location letters appears as the default word choice in the word choice list. Selection of this

Also Figure 2E below shows *sequence of tapped landing points (such as tapped landing points 2502, 2504, 2506, and 2508) corresponding in a one-to-one manner to a sequence of correctly or incorrectly entered letters (such as "g", "e/r", "a", and "t") of a word (such as "gray", "heat", "gear", and "feat") as claimed invention.*

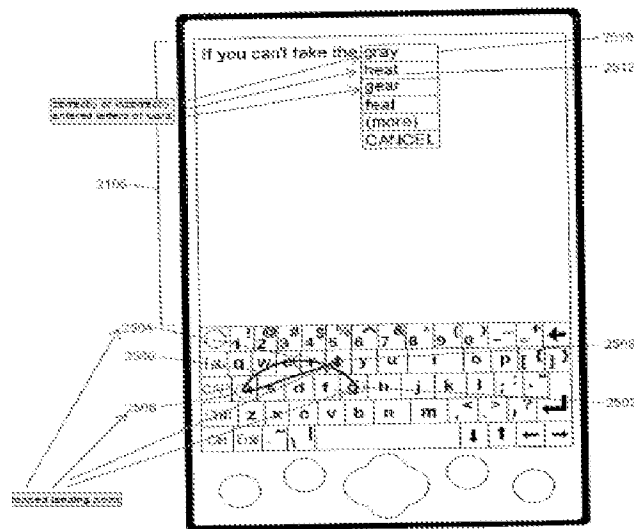


Figure 2E

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 2-7, 9-14, 16-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For example, claims recite "all the limitations of which are incorporated herein by reference". It is unclear what does it mean by "all limitation" and "herein by reference"? Which "reference"?

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Patent No. 7, 098, 896 issued to Kushler et al (Publication No. 2004/0140956 A1).

9. As per Claim 1, Kushler et al discloses a method of relaxing typing accuracy on a keyboard, said method comprising:

recording a sequence of at least two tapped landing points on said keyboard, each of said sequence of at least two tapped landing points having a coordinate, and said sequence of at least two tapped landing points corresponding in a one-to-one manner to a sequence of correctly or incorrectly entered letters of a word, and a tapped space bar that delimits said word (such as *...the system records the sequence of points of contact detected by the touch-screen...*; See: Col. 8 lines 11-15, Col. 20 lines 20-26);

counting a number of correctly or incorrectly entered letters of said word (such as *...records the sequence of points...*; See: Col. 8 lines 13-15);

selecting all words of a lexicon having a number of letters equal to said number of correctly or incorrectly entered letters of a said word (such as *...after the input pattern analysis component identifies the inflection points associated with an input pattern, the pattern matching component examines the words stored in the system database to determine which words are the most likely matching candidates...*; (See: Col. 12 lines 61-65)...*the words identified as the most likely candidates by the pattern matching component are offered to the user for selection by a word selection component...*(See:

Col. 18 lines 3-6); *for example see Fig. 2D the number of letters equal to the number correctly entered letters also Fig. 2B));*

comparing a geometric pattern (such as *pattern matching*) formed by said sequence of at least two landing points, excluding said tapped space bar, to another geometric pattern formed by said sequence of correctly or incorrectly entered letters for each selected word of said all words of a lexicon having a number of letters equal to said number of correctly or incorrectly entered letters by calculating a distance measure between said geometric pattern formed (such as *...after the input pattern analysis component identifies the inflection points associated with an input pattern, the pattern matching component examines the words stored in the system database to determine which words are the most likely matching candidates...*; (See: Col. 12 lines 61-65) by said sequence of at least two landing points (such as *...the expected path length for a word is calculated as the sum of the distances between the centers of the keys...*; See: Col. 13 lines 26-44), excluding said tapped space bar, and said another geometric pattern formed by letters said sequence of correctly or incorrectly entered letters for each selected word of said all words of a lexicon having a number of letters equal to said number of correctly or incorrectly entered letters (*...the words identified as the most likely candidates by the pattern matching component are offered to the user for selection by a word selection component...*(See: Col. 18 lines 3-6; *for example see Fig. 2D the number of letters equal to the number correctly entered letters*));

determining a word from said selected all words of a lexicon having a number of letters equal to said number of correctly or incorrectly entered letters by selecting

determining a shortest distance measure between said geometric pattern formed by said sequence of at least two tapped landing points, excluding said tapped space bar, and said another geometric pattern formed by said sequence of correctly or incorrectly entered letters for said determined word (such as *...the word selection component calculates a running average of the ratio of the actual measured length of the input pattern to the expected input path ...based on the expected input path length...the system determines which words in the database qualify as potentially matching candidates...*; See: Col. 13 lines 55-67); and

displaying, to a user, one of said determined word and said sequence of correctly or incorrectly entered letters of said word to check a correct spelling (such as *displaying the word "text", "test", "rest", for the tapping sequence of #2212-#2218...*; See: Fig. 2B).

10. As per Claim 2, Kushler et al discloses the method according to claim 1, all the limitations of which are incorporated herein by reference, wherein said distance measure comprises a mean distance based on summing a distance between each landing point coordinate and each corresponding center point coordinate of said correctly or incorrectly entered letters and said number of letters in said each selected word (such as *...the expected path length for a word is calculated as the sum of the distances between the centers of the keys associated with the letters...*; See: Col. 13 lines 32-35).

11. As per Claim 3, Kushler et al discloses the method according to claim 1, all the limitations of which are incorporated herein by reference, wherein said distance measure comprises an elastic matching distance between each landing point coordinate

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and each corresponding center point coordinate of said correctly or incorrectly entered letters (such as...*the expected path length for a word is calculated as the sum of the distances between the centers of the keys...*; See: Col. 13 lines 26-44).

12. As per Claim 4, Kushler et al discloses the method according to claim 3, all the limitations of which are incorporated herein by reference, further comprising normalizing said elastic matching distance by said number of letters in said each selected word (such as ...*identifying the optimal matching between the M letters and of a candidate word and the N identified inflection points and input pattern path segments is a variant of the "short path" problem which is well known in the field of dynamic programming...*; See: Col. 15 lines 43-60).

13. As per Claim 5, Kushler et al discloses the method according to claim 1, all the limitations of which are incorporated herein by reference, further comprising comparing said shortest total distance measure to a threshold (such as...*the expected path length for a word is calculated as the sum of the distances between the centers of the keys...*; See: Col. 13 lines 26-44).

14. As per Claim 6, Kushler et al discloses the method according to claim 5, all the limitations of which are incorporated herein by reference, further comprising displaying said determined word, if said shortest distance measure is smaller than said threshold otherwise displaying said sequence of correctly or incorrectly entered letters (such as *displaying the word "text", "test", "rest", for the tapping sequence of #2212-#2218...*; See: Fig. 2B).

15. As per Claim 7, Kushler et al discloses the method according to claim 1, all the limitations of which are incorporated herein by reference, wherein each tapped landing point comprises moving a finger or a stylus from a first position not contacting said keyboard, to a second position contacting said keyboard at said each landing point, and to a third position not contacting said keyboard (such as *...the user proceeds to continue tapping the keyboard, then the sequence of taps generates a word object...following the second tap, this words composed of the tap location letters...*; See: Col. 20 lines 20-26).

16. As per Claim 8, Kushler et al discloses a method of relaxing typing accuracy on a computer keyboard, said method comprising:

recording sequence of at least two tapped landing points on said keyboard, each of said sequence of at least two tapped landing points having a coordinate, and said sequence of at least two tapped landing points corresponding in a one-to-one manner to a sequence of correctly or incorrectly entered letters of a word, and a tapped space bar that delimits said word (such as *...the system records the sequence of points of contact detected by the touch-screen...*; See: Col. 8 lines 11-15);

counting a number of correctly or incorrectly entered letters of said word (such as *...records the sequence of points...*; See: Col. 8 lines 13-15);

selecting all words of a lexicon having a same number of letters equal to said number of correctly or incorrectly entered letters of said word (such as *...after the input pattern analysis component identifies the inflection points associated with an input pattern, the pattern matching component examines the words stored in the system*

database to determine which words are the most likely matching candidates...; (See: Col. 12 lines 61-65)...the words identified as the most likely candidates by the pattern matching component are offered to the user for selection by word selection component...(See: Col. 18 lines 3-6));

for all words having said number of letters, computing a distance between a landing point coordinate and a corresponding center point coordinate of said correctly or incorrectly entered letter of said word for each landing point in said sequence of at least two tapped landing points (such as *...the location of each displayed texts character key is defined by the screen coordinates of the center of the key, which is the location used when determining the distance of letter associated with the key...*; See: Col. 8 lines 25-31, Col. 20 lines 20-26);

for each word of said all words having said number of letters, computing a mean distance based on summing each said distance between a landing point coordinate and a corresponding center point coordinate of said correctly or incorrectly entered letter of said each word and said number of letters in said each word (such as *...the expected path length for a word is calculated as the sum of the distances between the centers of the keys associated with the letters...*; See: Col. 13 lines 30-35); and

determining a word from said selected all words of a lexicon having a number of letters equal to said number of correctly or incorrectly entered letters by determining a shortest mean distance between said sequence of at least two landing points, excluding said space bar, and said sequence of correctly or incorrectly entered letters for said determined word (such as *...the word selection component calculates a running*

average of the ratio of the actual measured length of the input pattern to the expected input path ...based on the expected input path length...the system determines which words in the database qualify as potentially matching candidates...; See: Col. 13 lines 55-67); and

displaying, to a user, one of said determined word and said sequence of correctly or incorrectly entered letters of said word to check a correct spelling (such as *displaying the word "text", "test", "rest", for the tapping sequence of #2212-#2218...*; See: Fig. 2B)..

17. As per Claim 9, Kushler et al discloses the method according to claim 8, all the limitations of which are incorporated herein by reference, wherein said keyboard comprises one of a physical keyboard, a virtual keyboard, a stylus keyboard, a graphical keyboard, and a touch-screen (such as *..virtual keyboard or touch-screen..*; See: Fig. 2A).

18. As per Claims 10-22, the instant claims recite substantially same limitation as the above rejected claims 1-7, and 9, and therefore rejected under the same rationale.

Conclusion

19. All claims are rejected.

20. The prior art made of record on PTO-892 and not relied upon is considered pertinent to applicant's disclosure.

Examiner Remarks

21. Examiner's Note: **Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant.**

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Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. **It is respectfully requested from the applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.**

Examiner Request

22. **In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on** for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

MPEP states:

"...with respect to newly added or amended claims, applicant should show support in the original disclosure for the new or amended claims. See MPEP § 714.02 and § 2163.06."

Communications

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kibrom K. Gebresilassie whose telephone number is 571-272-8571. The examiner can normally be reached on 8:00 am - 4:30 pm Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini S. Shah can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kamini S Shah/

Supervisory Patent Examiner, Art Unit 2128

/Kibrom K Gebresilassie/

Examiner, Art Unit 2128